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PRACTICAL REMARKS
ON
ENLARGED TONSILS,
WITH A NEW APPARATUS FOR THEIR REMOVAL.
AND A PLATE.

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ENLARGEMENT of the tonsil is an exceedingly prevalent complaint, and is sometimes the unsuspected cause of habitual quinsy, partial deafness, a peculiar guttural change in the voice, and continual difficulty of deglutition and respiration.

In many recent and transient swellings of these glands, no operation whatever is necessary, and in others of considerable tumefaction and inflammation, slight scarifications produce the most perfect relief.

There are cases, however, where, from the frequent recurrence of inflammations, or from some idiosyncrasy of constitution, these tumours become permanently enlarged, and occasion the symptoms already mentioned.

Partial deafness results from the pressure of the glands upon the orifice of the eustachian tube. Difficulty of deglutition, is the consequence of the glands being themselves acted on by every attempt at swallowing. This occasions pain and inflammation in the surrounding tissues, and an aggravation of all the symptoms.

Sometimes the obstruction to respiration produces death. I was told by a medical gentleman who saw the patient, that this result occurred in this city within the last two years. He said that the surgeon, who attempted to remove the swollen gland by a ligature, was forced to desist, in consequence of the patient being threatened with immediate suffocation, when an attempt was made to tighten the noose of the wire. The case was consequently abandoned, and the child became a victim to his disease. Similar danger I once saw, in the case of an old gentleman (perhaps seventy years of age) under the care of Dr. Physick, and my preceptor, Dr. Parrish, of Philadelphia. He came from the country to obtain relief from this disease, under which he had labored nearly all his life. He had pa-

roxysms of difficulty of respiration, in which he appeared to be in imminent danger of suffocation. The glands had become very much elongated, were habitually swallowed, and adhered their whole length to the side of the throat; hence, great difficulty was experienced in including them in a ligature. After several unsuccessful efforts, Dr. Physick at length was able to apply it round one of the glands; but the patient appeared in great suffering and danger from the operation. For a long time, his breathing was excessively difficult; the face was livid and tumefied; and, though he recovered, to me he seemed to have incurred no inconsiderable hazard of life.

Great constitutional irritation and fretfulness of temper often accompany, in children, this disease; and the development of the intellectual faculties, as well as the growth of the body, is injured from the same cause. It often happens that children who are troubled but slightly in this way, when attacked with inflammatory diseases, as catarrh, scarlatina, measles, &c., suffer so great an enlargement of the tonsils, as not only to leave a very serious complaint, but very much to diminish the probability of their recovery, or greatly to contribute to the fatal termination of the case. Such is the unfortunate situation of a little patient now under my care. He has had scarlatina; but from the increased obstruction to respiration, the difficulty of swallowing, the impedient to the return of venous blood from the head, and the general irritation he endures, I cannot but fear for the result—that he will become a victim to their combined effects.

It is sometimes asked whether it would not be preferable, in children, to trust the case to the spontaneous change which nature produces in the progress of the constitution to maturity; or, in other words, to depend on the child's outgrowing the complaint. It must be admitted that, in many cases where the enlargement exists in infancy, the natural development of the size of the throat removes the glands farther apart, and prevents that mechanical irritation which, at an early period, they produced on each other. In this way the tumefaction subsides, and perfect recovery follows. On the other hand, as in one of the cases already mentioned, we have an instance of the duration of the disease through a long lifetime, and, in old age, the patient was glad to submit to an operation rendered more severe by delay; and which, if performed in early life, would have secured to him years of health and enjoyment, which were passed in continual suffering and apprehension.

In all cases of doubt about the propriety of removing these glands in early life, where much suffering exists, if it were possible to effect an immediate removal by an operation free from pain and danger, it appears to me that no real objection could be urged against it. Such an operation I wish to recommend to the profession.

In some instances, the spontaneous cure itself is effected by a process most severe, and generally unsuspected, viz. the entire removal of the glands by frequent suppurations. A lady whom I know, was subject to severe and repeated attacks of quinsy during the early part of life. Abscesses formed in the throat, and were permitted to break. Her sufferings were indescribable, and were renewed by every change of weather, during five or six successive winters. No efficient treatment was, at any period, adopted; but, after this time, she was entirely exempt from her suffering. The present state of her throat explains perfectly how this result was effected. The space between the lateral half arches, occupied by the tonsils in the natural condition of the parts, is perfectly smooth. There are no remains of these organs. They have been ulcerated away; and the disease has thus painfully and tediously effected what a skilful operation would have done instantly without danger.

In another instance, where a patient had, during every winter, suffered from severe quinsy, the operation performed by the ligature on her tonsils, produced complete immunity from further disease. This lady, a wealthy and respectable woman, assured the surgeon, that, besides all her suffering during the preceding ten years, it had cost her, in doctors' fees, nearly one thousand dollars.

The usual methods of effecting the removal of the tonsils, are by the ligature and the knife.

The first method is unaccompanied by the danger of hemorrhage, but every modification of this plan is excessively painful. It is, also, not free from the liability of causing suffocation, particularly in the very cases where the operation is most necessary; that is, where suffocation is threatened by the disease itself. In many of these instances, it is positively inadmissible. The pain occasioned by this process is, by no means, a small objection to it. There is no charge made against the character of a surgeon more dishonorable to him, than inhumanity in the wanton and brutal infliction of unnecessary pain. It would be an improvement in this branch of our profession, to rob every operation of its horror, and obtain the same splendid and salutary results without the agony and the danger which now necessarily accompany, in a greater or less degree, almost every surgical operation.

There are other objections to the use of the ligature in the removal of elongated tonsils. Several days elapse before each tumor sloughs away, and is removed from the throat. During the time that the putrefying mass occupies the fauces, an unhealthy and fetid fluid distils from it, and is liable to pass into the stomach, particularly during sleep. It injures digestion, and destroys, for some time, the health and comfort of the patient. Another inconvenience results from the ligature. The application, if made tight

at once, is not capable of destroying the vitality of the whole mass. A considerable depth of surface is killed, and the absorbents remove it; but there remains still, in the centre, a projecting body, which it had been better to have removed at once, if possible, as it may still be the occasion of irritation, or the seat of future inflammations and disease.

The second method, by the knife, is less painful; but the danger of hemorrhage from the use of an unguarded bistoury, in a vicinity so vascular as the throat, agitated, too, during an operation by involuntary spasm, and where a ligature cannot be applied, though authorized by Bertrandi, and successfully practised by Dupuytren and others, is still by many, and, perhaps, the majority of the profession, very properly condemned. Fatal results have occurred from it, and I have been told by two gentlemen who have used it, that in both cases the actual cautery (a most horrid and objectionable expedient, especially in the throat) was the only thing which, in their opinion, prevented a fatal hemorrhage.

In consequence of objections to the usual methods of removing tonsils, several ingenious instruments have been introduced in order to apply the knife without injury to the adjoining parts. One of these, invented by the venerable and judicious Dr. Physick, is communicated in the American Journal of Medical Science, for February, 1828. Dr. Caleb B. Mathews, in the American Medical Recorder for April, of the same year, has given to the profession another most ingenious apparatus. It is not my intention to institute a comparison between these instruments and my own. They both obviate one great objection to the unguarded knife. The operation with them secures the truncation of the tumor, which is the proper method, while the surrounding parts are protected from any inadvertent injury. But whoever seizes the tumor with a hook, and proceeds to remove it with an unguarded bistoury, besides endangering the neighboring parts, will be likely to extirpate the whole gland, and thus necessarily cut the trunk of the artery which supplies it, before it has begun to ramify in its substance. Hence copious hemorrhage will necessarily result, and the actual cautery must be used.

There is one aspect in which the instruments before alluded to, appear to me somewhat objectionable. They both take from the hand of the surgeon the proper guidance of the knife, and commit it to the operation of machinery. There are many possibilities in surgery which may require the motion of the knife to be modified in direction, force, &c., and to me it appears that no human contrivance can ever suit so admirably all the emergencies that may occur in an operation as the hand of the surgeon. It is therefore desirable, in the introduction of new surgical instruments, to supersede as little as possible the use of that divine invention, the human hand.

Dr. Mathews does not say that he has performed any opera-

tion with his instrument, and though constructed on correct principles, it may, from a variety of causes, be utterly useless in practice. It is always desirable to know whether a new invention can be used; and this can never be absolutely decided, until it has been tried. The ligature has never but once been used by me in this case, and such was the suffering endured by my patient, as to induce me to attempt some less painful means. The result of a great deal of attention to this subject is now submitted to the profession in the instruments of which a plate and description are annexed. More than forty operations enable me to recommend them with confidence for their practical utility, and though several were performed with defective apparatus, yet there has never occurred any thing to weaken my confidence in the plan. Every operation has succeeded, and, indeed, has given instant relief. There has been no hemorrhage, nor have I ever been *obliged* to use astringents.

A few cases will, perhaps, best illustrate the facility with which relief can be afforded to the patient suffering with enlarged tonsils.

CASE I. I was called by S. F. Randolph, Esq., April 26, 1828, to see a relative of his from the country, a boy of nine years old, whose tonsils completely filled the throat, pressing forward the uvula. The usual symptoms were all present, and he had not for three months been able to swallow a mouthful of animal food. His general health was still unimpaired. For the first time, I used my new instrument, in the presence of Dr. Alexander H. Smith, formerly my student, and Dr. Seaman. The right tonsil was included in the ring, and completely filled it. The knife was made to follow the groove, and the tumor, as large as a pigeon's egg, was thus cut through without delay or difficulty. The operation was but momentary, and the little patient assured us that it was not painful, and complained only of the presence of the instrument in his throat, which induced efforts to vomit. There was only a little bloody saliva discharged. His breathing was immediately relieved, and he partook of animal food at dinner for the first time in a quarter of a year. No medicine or restraint whatever was directed, or at all necessary.

On the 29th, I removed the other tumor, in presence of Dr. C. C. Blatchly. Deafness, unnatural voice, difficulty of swallowing and breathing, and habitual sore throat, have, by this simple process, been immediately and permanently relieved.

CASE II. On the 30th December, 1828, I was called to see a son of the Rev. Joshua Leavitt, of this city. He had large tonsils, which filled his throat, and for four years had prevented him from the use of animal food, a circumstance the more unfortunate, as he was of a scrofulous diathesis, and was rendered nervous and delicate by this privation. He labored under all

the usual symptoms of this disease in an aggravated form. His father had consulted the late Dr. Nathan Smith, of New Haven, who declined the use of the ligature from the extreme delicacy of the child's constitution, and the severity of that operation. I removed the tumor on the right side in a few seconds, in the presence of Dr. Gilbert Heston. There was no hemorrhage. The little fellow (being a politician) fixed the fourth of March for the removal of the other swelling. In the mean time, his father called on me to give me this information, and stated that such was the relief his son had experienced from his former severe suffering, that were it necessary to its continuance he would willingly subject him to the operation every month as long as he lived. On the day fixed for the removal of the second tumor, Drs. Baily, Tomlinson, Torrey, and Ives, were present. It was done in a few seconds, and the tumefaction having subsided since the first operation, it bled two or three drachms. This has been invariably the case in removing the second tumor. The irritation occasioned by the presence of the first being taken away, the other gland diminishes in size from absorption of the matter deposited during inflammation in its cells. The vessels bleed more freely, because the removal of this interstitial deposit permits the expansion of their mouths. It was very surprising to me to observe no hemorrhage from the largest and reddest tumors, while the smaller were invariably both more difficult to cut, and discharged more blood; but on a little reflection it appears to be natural and easily accounted for.

CASE III. February 24th, 1829. I was called by my friend, Dr. Downs, to see a little boy not five years old, son of Mr. Townsend, near the Dry Dock. He had been nearly his whole life subject to swelled tonsils, and had suffered severely from them, but was thought by his friends to be in danger of immediate suffocation during the preceding night. The tumors not only filled the throat, but pushed forward into the mouth. I removed the right tumor in presence of Dr. Downs and Dr. Marvin. He was immediately relieved, and his throat on that side appeared unobstructed. On the 27th, I was sent for to see him; suffocation again threatened him. I found another tumor occupying the place from which the first was taken. It was removed with immediate and permanent relief. It is evident that in this case the tumefaction had separated each tumor into its two lobes. The anterior lobe was forced forward on each side, and the posterior one backward, because there was no room for them to swell across the throat, or in any other direction; hence they were torn to their base, and divided into two. After the first operation, the posterior lobe was out of sight for some time, and when removed it bore the mark of having passed three quarters of an inch down the

throat beyond its base. On the removal of the first, this came forward in one of the violent efforts of the parts, and occupied its place, occasioning the return of all the severer symptoms. From this case I have been led to draw two inferences ; first, that the unavoidable tumefaction produced by a ligature would have caused death by strangulation ; and second, that an unguarded knife where the tumors were so low down and the mouth and throat so exceedingly small, would have been not only highly dangerous, but almost certainly fatal. On the 13th of March, I removed at one operation the two tumors formed by the separated lobes of the tonsil of the left side. They were taken away together, and were much smaller than in the former cases. They bled more than the first, but not more than two drachms were lost. I saw this patient in July ; he was quite a different child ; from a puny and delicate boy, remarkably small for his age, as he was in the winter, he had become uncommonly robust and healthful in his appearance, and his parents say that the operation constitutes an era in his life since which he has been as remarkable for entire health, as he was before for the entire want of it.

Description of the Instruments. The apparatus consists of several oval rings of different sizes, all adapted to a common handle, and two knives ; to each ring is soldered a silver stem of one inch in length, with a screw at its extremity, by which it is attached to the handle. The stem and handle make an obtuse angle with the plane of the ring, (figure 1,) and are thus prevented from interfering with the motion of the knife during the operation. On one face of the ring is a dovetailed groove, having the aperture widened near the stem, (at *c*,) to admit the beak of the knife, which slides easily along the groove, from which it cannot be extracted at any other part.

The knives resemble each other with the difference that the beaks are placed on the opposite sides of the blade, (figures 3 and 4.) They are of the same length with the other instrument, viz. about seven inches. The handle and blade are of equal lengths ; the cutting edge extends about an inch and a half from the point, and is concave. The beak (*d*) consists of a small piece of steel, of the shape of a pin's head, attached at right angles by a screw to the side of the end of the knife, and is adapted to move easily in the groove (*e*) on the face of the ring.

Directions for performing the Operation. In performing the operation, the first object is to ascertain which ring will most exactly receive the tumor ; this to be screwed to the handle. The patient to be seated in a good light. The surgeon requires no spatula to depress the tongue. The ring may be used for this purpose until the tumor is seen. It should be then applied round it, taking care to keep the grooved face towards the cavity of the throat ; then taking the knife whose beak is properly situated for the side on which he operates, the operator introduces the beak into the

wide part of the groove (c.) The knife should then be passed along the groove firmly upwards and onwards, till it reach the opposite side of the ring, when its point must be pressed downwards, and thus round towards its starting place. The tumor falls into the mouth, and, by a little adroitness, may be brought out with the instruments.

The Scissors are for removing the extremity of the elongated uvula, and are decidedly the best instrument for the purpose. A plate of a similar pair may be found in Cooper's First Lines of Surgery, vol. 1. p. 528, New York edition.

It is due to the ingenious artist, to whose skill and perseverance so much of the success of this invention is owing to state that, after an assurance from several, of the absolute impracticability of making the instruments, owing to the difficulty of turning the rings, they were first perfected by Mr. John Wiegand, then of this city, since removed to Philadelphia. The workmanship has been universally pronounced, by competent judges, to be at least equal to any thing of its kind.

Explanation of the Plate. Fig. 1. The instrument, by the ring at the end of which, the tonsil is surrounded, and held during the operation.

(a) The point at which the silver stem is screwed to the handle.

(b) The place where the silver stem is soldered to the ring at an obtuse angle.

Fig. 2. The tonsil knife for the left side.

(c) The termination of the cutting edge, which is concave to the point.

(d) The beak adapted to the groove on the face of the ring.

(e) The groove which conducts the beak of the knife around the tonsil. It is here a little widened to receive the beak

Figs. 3 and 4. Profile views of the beaks at the ends of the knives.

Fig. 5. A convex edged knife, (on some accounts not so good as the other.)

Fig. 6. A pair of scissors with a transverse extremity to one of the blades, for removing a portion of the elongated uvula.